

REMARKS

Reconsideration and withdrawal of all grounds of rejection contained in the Office Action are respectfully requested in light of the above amendments and the following remarks. Base claim 1 has been amended, no new matter has been added, support for these amendments can be found at least in FIG. 2 and the specification on page 7, line 25 through page 8, line 8. Claims 1-22 are pending herein.

To begin, Applicants note with appreciation the indication that claims 7 and 9 have been allowed.

Claims 1-6, 8, 10-11, 13-15 and 22 stand rejected under 35 U.S.C. §102(e) over Limberg et al. (U.S. 2002/0051087 A1, hereinafter "Limberg"). Applicants respectfully traverse this ground of rejection. Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Limberg et al. in view of Koo et al. (U.S. Patent No. 5,283,650).

Claims 16-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1 and 9 of co-pending Application 09/848,061 in view of Limberg.

Applicants respectfully submit that the amendments made to claim 1 overcome all of the non-provisional rejections listed above.

Base claim 1 has been amended to recite (*inter alia*): a first equalizer having an input for receiving a transmitted digital data stream comprising a plurality of field syncs, a plurality of segments of symbol spaces between successive ones of the field syncs, and a plurality of echo cancellation reference signals are positioned between the field syncs, wherein the plurality of echo cancellation reference signals are positioned at respective

locations between the field syncs according to a desired temporal rate coverage of dynamically changing echoes... and a digital television receiver having a second equalizer and an input coupled to the output of the first equalizer.

Applicants respectfully submit that Limberg does not disclose, suggest, or provide the above limitations. Although, Limberg, in col. 6, [0054], teaches that the digital base band DTV signal is subjected to band-shaping filtering ... before its application as in put signal to adaptive filtering used for channel equalization and echo-cancellation..., it does not teach a first or pre-equalization subsystem, as claimed in the present invention. Illustratively, the first or pre-equalization subsystem of the present invention produces a fully ATSC compliant signal at it output, which is then used as an input to a standard VSB receiver. Limberg simply receives a DTV signal and process it in an adaptive filter for echo-cancellation without pre-equalization processing, as in the present invention.

Still further, Applicants can find nothing in Limberg that teaches the limitations of an equalizer having an input for receiving a transmitted digital data stream comprising *a plurality of field syncs, a plurality of segments of symbol spaces between successive ones of the field syncs, and a plurality of echo cancellation reference signals are positioned between the field syncs, wherein the plurality of echo cancellation reference signals are positioned at respective locations between the field syncs according to a desired temporal rate coverage of dynamically changing echoes...*

Accordingly, it is respectfully submitted that at least for the reasons indicated above, amended base claim 1 is patentable. With regard to the rejection under 35 U.S.C. §102(b), the Court of Appeals for Federal Circuit has held that:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628,631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants respectfully submit that claim 12 is believed to be allowable at least for its dependence from claim 1, which is believed to be allowable for the above reasons stated in the traversal of the rejection under 35 U.S.C. §102(e). For at least this reason, reconsideration and withdrawal of this ground of rejection are respectfully requested.

Claims 16-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1 and 9 of co-pending Application 09/848,061 in view of Limberg. Applicants respectfully traverse this ground of rejection.

Applicants have carefully reviewed claims 1 and 9 of our co-pending application 09/848,061 and respectfully submit that these claims do not recite that a “substantially echo-free digital data stream” is provided. The addition of Limberg does not cure this infirmity. Further, as provided above, Limberg does not disclose that a substantially echo-free digital data stream *is furnished to* a digital television receiver (via a first equalizer). Thus, in Limberg an analog signal is converted to digital, subjected to band-shaped filtering, then subject to adaptive filtering for channel equalization and echo-cancellation. Limberg says nothing with regard to receiving a substantially echo-free data stream, nor does it disclose or suggest furnishing the substantially echo-free digital data stream to a DTV via a pre-equalization subsystem. As claims 1 and 9 of the co-pending application do not recite that a substantially echo-free digital data stream is provided after processing a digital data stream, nor that such a substantially echo-free

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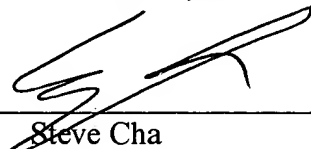
digital stream is furnished to a DTV, and Limberg also fails in this regard, it cannot be said that instant claim 16 is obvious over claims 1 and 9 of the co-pending application in view of Limberg.

Accordingly, reconsideration and withdrawal of this ground of rejection are respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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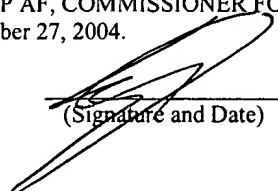
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